PCI2307

User’s Manual

Beijing ART Technology Development Co., Ltd.

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Chapter 1 Overview

PCI2307 is an opto-isolator input and relay output board, mainly used for industrial control and related fields.

Unpacking Checklist

Check the shipping carton for any damage. If the shipping carton and contents are damaged, notify the local dealer or sales for a replacement. Retain the shipping carton and packing material for inspection by the dealer.
Check for the following items in the package. If there are any missing items, contact your local dealer or sales.

- PCI2307 Data Acquisition Board
- ART Disk
  a) user's manual (pdf)
  b) drive
  c) catalog
- Warranty Card

FEATURES

Digital Input

- 16-ch opto-isolated input
- The change of digital input channel 0 (DIO) status can make computer generates hardware interrupt, the direction option.
- Input signal rate: 10KH$_Z$
- Isolation Voltage: 3750Vrms(Min.)
- Input Voltage: 5~24V

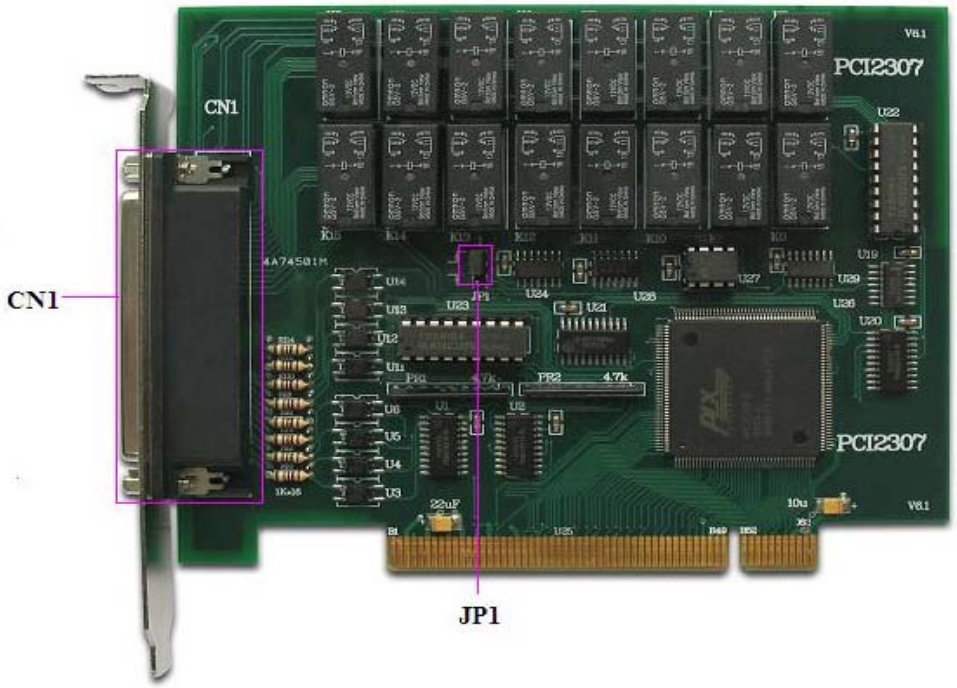
Digital Output

- 16-ch isolated relay output
- Each channel only has N.O. Contact, contact disconnects when power on.
- Switching capacity: maximum current 2A, voltage 60V$_{DC}$/120V$_{AC}$
- Transient Voltage: 2000V$_{AC}$(20us)
- Spulenkontakt Voltage: 1500V$_{AC}$ 1min
- Contact Capacity: 1A 24V$_{DC}$ / 120V$_{AC}$
- Connection Time: 6ms
- Break Time: 4ms

Board Dimension: 143mm (L)*107mm (W) *15mm (H)

Chapter 2 Components Layout Diagram and a Brief Description

2.1 The Main Component Layout Diagram



2.2 Jumper and Interface Description

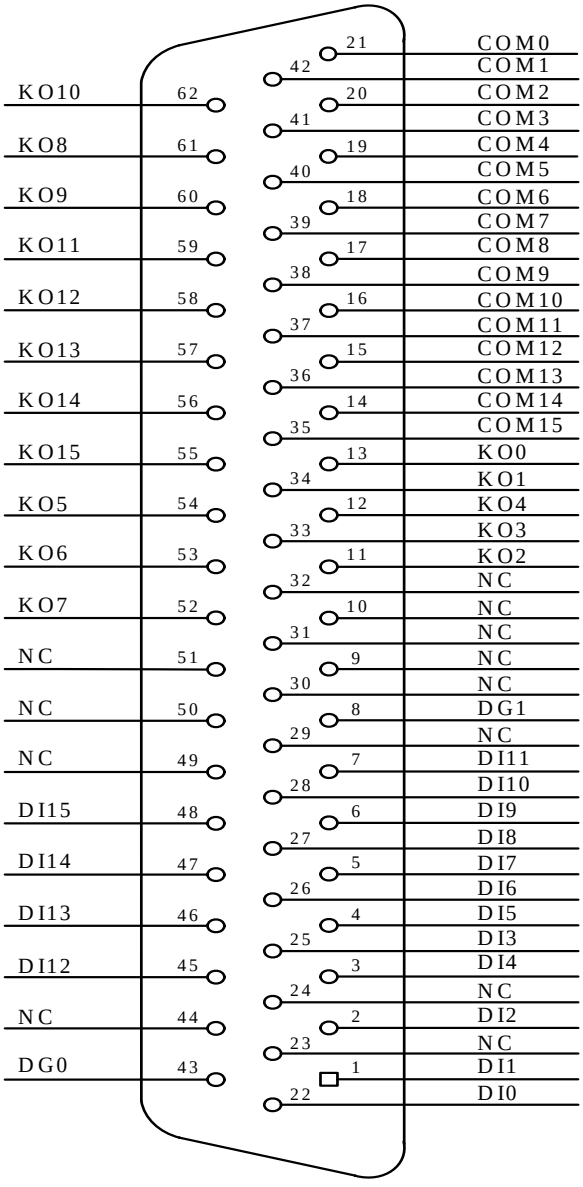
Please refer to the first section of the main component layout diagram, to understand the general function of the following main components.

CN1: signal input and output connector
JP1: Interrupt mode selected
1-2 shorted: Interrupt when DI0 signal has a rising edge
2-3 shorted: Interrupt when DI0 signal has a falling edge

1-2 shorted: rising edge trigger

2-3 shorted: falling edge trigger

62 core plug on the CN1 pin definition



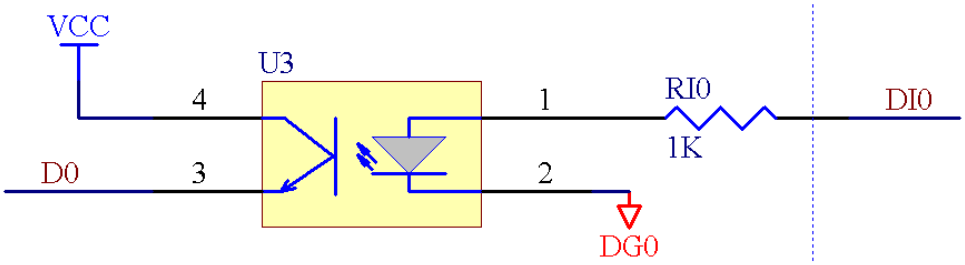
Pin definition

Signal Name	Type	Definition
DI0~DI15	Input	Digital signal input pins, the reference ground of DI0~DI7 is DG0, the reference ground of DI8
KO0~KO15	Output	Relay normal on contact, relay output pins
COM0~COM15	Output	Relay common contact, COMi correspond with KOi
DG1	Input	Digital ground, DI8~DI15 reference ground
DG0	Input	Digital ground, DI0~DI7 reference ground
NC		No Connection

Chapter 3 Connection Ways for Input and Output

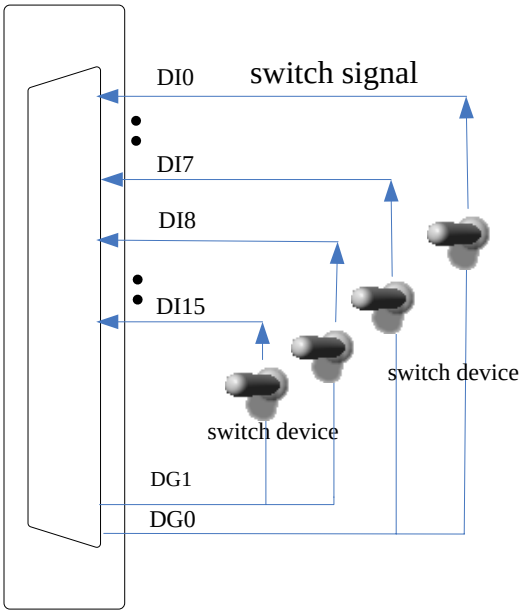
3.1 Input Principle and wiring

DI0 ~ DI15 input principles are the same, the following description the DI0's principle, the others are the same.



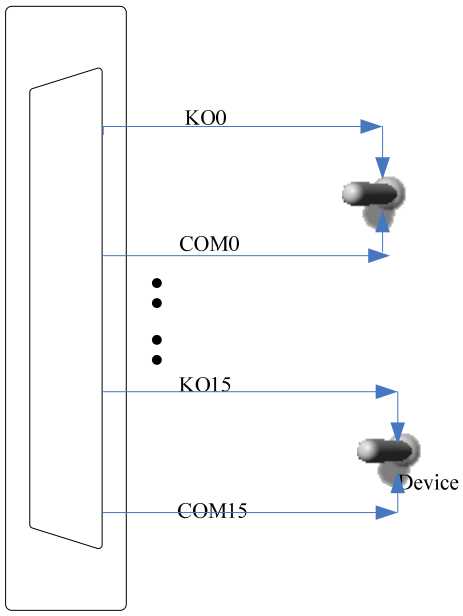
DI0 is the input signal. The following is the working principle of DI0: when DI0 is low-level, there is no voltage difference between the 1 and 2 pin (than is, correspond with the DI0 and DG0) of the optocoupler U3, no internal current, therefore the light-emitting diode is non-luminous, the internal dynatron is not on, in other words, the 3-pin and 4-pin are not connected together, the 3-pin output signal is low-level. When DI0 is high-level, the result is contrary to above.

DI connection as follows



3.2 Output wiring

KO0 ~ KO15 is relay output, COM0 ~ COM15 its common contact.



Chapter 4 Notes and Warranty Policy

4.1 Notes

In our products' packing, user can find a user manual, a PCI2307 module and a quality guarantee card. Users must keep quality guarantee card carefully, if the products have some problems and need repairing, please send products together with quality guarantee card to ART, we will provide good after-sale service and solve the problem as quickly as we can.

When using PCI2307, in order to prevent the IC (chip) from electrostatic harm, please do not touch IC (chip) in the front panel of PCI2307 module.

4.2 Warranty Policy

Thank you for choosing ART. To understand your rights and enjoy all the after-sales services we offer, please read the following carefully.

1. Before using ART's products please read the user manual and follow the instructions exactly. When sending in damaged products for repair, please attach an RMA application form which can be downloaded from: www.art-control.com.

2. All ART products come with a limited two-year warranty:

- The warranty period starts on the day the product is shipped from ART's factory
- For products containing storage devices (hard drives, flash cards, etc.), please back up your data before sending them for repair. ART is not responsible for any loss of data.
- Please ensure the use of properly licensed software with our systems. ART does not condone the use of pirated software and will not service systems using such software. ART will not be held legally responsible for products shipped with unlicensed software installed by the user.

3. Our repair service is not covered by ART's guarantee in the following situations:

- Damage caused by not following instructions in the User's Manual.
- Damage caused by carelessness on the user's part during product transportation.
- Damage caused by unsuitable storage environments (i.e. high temperatures, high humidity, or volatile chemicals).
- Damage from improper repair by unauthorized ART technicians.
- Products with altered and/or damaged serial numbers are not entitled to our service.

4. Customers are responsible for shipping costs to transport damaged products to our company or sales office.

5. To ensure the speed and quality of product repair, please download an RMA application form from our company website.

Products Rapid Installation and Self-check

Rapid Installation

Product-driven procedure is the operating system adaptive installation mode. After inserting the disc, you can select the appropriate board type on the pop-up interface, click the button【driver installation】; or select CD-ROM drive in Resource Explorer, locate the product catalog and enter into the APP folder, and implement Setup.exe file. After the installation, pop-up CD-ROM, shut off your computer, insert the PCI card. If it is a USB product, it can be directly inserted into the device. When the system prompts that it finds a new hardware, you do not specify a drive path, the operating system can automatically look up it from the system directory, and then you can complete the installation.

Self-check

At this moment, there should be installation information of the installed device in the Device Manager (when the device does not work, you can check this item.). Open "Start -> Programs -> ART Demonstration Monitoring and Control System -> Corresponding Board -> Advanced Testing Presentation System", the program is a standard testing procedure. Based on the specification of Pin definition, connect the signal acquisition data and test whether AD is normal or not. Connect the input pins to the corresponding output pins and use the testing procedure to test whether the switch is normal or not.

Delete Wrong Installation

When you select the wrong drive, or viruses lead to driver error, you can carry out the following operations: In Resource Explorer, open CD-ROM drive, run Others-> SUPPORT-> PCI.bat procedures, and delete the hardware information that relevant to our boards, and then carry out the process of section I all over again, we can complete the new installation.